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INTEGRATED ELECTRIC MOTOR-DRIVEN OIL PUMP FOR
AUTOMATIC TRANSMISSIONS IN HYBRID APPLICATIONS

ABSTRACT OF THE DISCLOSURE

An electric motor is connected solidly to the main transmission oil pump shaft on the transmission case. An off-axis chain and gear are connected to the main oil pump shaft via a single freewheeling clutch, so that
5 either source of torque in a hybrid motor can drive the oil pump or the oil pump can be driven by the electric motor or the hybrid motor depending on which motor is traveling at a higher speed.